

## SUBACROMIAL DISLOCATION FROM MUSCULAR SPASM.

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THE following case is of interest partly on account of the etiology, partly on account of the long time, three months, in which the patient suffered from the deformity of a shoulder dislocation without suspecting it or seeking surgical treatment, he all the time believing that he had rheumatism of the shoulder.

The patient, a strong, muscular man, thirty-eight years of age, had always enjoyed good health, with the exception of some indigestion. On January 23, 1902, his wife woke up during the night and found him breathing heavily, with rigid muscles, eyes fixed, and grating of the teeth. The tongue was severely bitten during the attack, and there is now an extensive scar on its left side. During breakfast, next morning, he remembered nothing whatever about this attack, and wondered over his sore tongue. He consulted his family physician, Dr. C. S. Jones, during the day, complaining over dizziness, headache, the sore tongue, and lameness of his right shoulder. He had previously noted occasional attacks of a slight dizzy sensation, without loss of consciousness, which forced him to sit down for a few minutes. He ascribed these attacks to indigestion, as they, so far as he remembered, generally occurred after a heavy meal. No treatment had been used, as he otherwise felt perfectly well. Dr. Jones gave him a laxative and regulated his diet, but considered it best not to mention for the time being that he probably had had an epileptic fit. No examination was made of the shoulder.

He called on Dr. Jones again on April 18, 1902, complaining that his right shoulder still was very lame, and that he found great difficulty in dressing himself. The doctor examined him carefully, and discovered some fulness under the outer side of the spine of the scapula, with considerable atrophy of the deltoid and posterior muscles, and complete absence of motions in the

shoulder-joint. Believing he had some form of dislocation, he brought him to me for consultation. By the examination very slight changes of the contour of the shoulder were discovered, but lying down there was a great prominence of the coracoid process, with some flattening of the shoulder, with prominence of the acromion in front and fulness behind, where a rounded prominence could be felt under the posterior margin of the acromion. There was considerable atrophy of the deltoid, supraspinatus and infraspinatus muscles, and less prominence under the acromion from the tubercles of the humerus than on the left side. Movements in the shoulder-joint were completely abolished, all motions, and they were very limited, taking place between the scapula and the two joints of the clavicle. The arm was held somewhat forward and away from the body, and was rotated strongly inward. Outward rotations were impossible and the attempts painful. Recognizing a subacromial dislocation, we tried reduction under chloroform on the same day, but unsuccessfully, particularly on account of the impossibility of fixing the scapula during the attempts with the means at hand. A harness was therefore made, consisting of a broad, well-padded leather belt going around the right half of the chest, with a strap over the shoulder to keep it in place, and fastened with a rope to the wall some feet from the patient's left side. A well-padded cylinder of leather was made to surround the right humerus, the elbow being free in order to use rotations, and fastened with triple pulleys to the wall on the patient's right side. Under deep narcosis, a few days afterwards, the arm was now pulled with great force, but slowly and carefully, in an outward and upward direction, and the prominence under the posterior margin of the acromion was felt to move little by little. After strong outward rotation the prominence disappeared, and the dislocation was reduced. The arm was bandaged with a broad, adhesive plaster strap, as in fracture of the clavicle, keeping the elbow backward and the head of the humerus forward for a few days, and massage and passive motions then commenced. Under this treatment the shoulder is rapidly improving and complete recovery is expected.

The X-ray picture, taken by Dr. Pitkins, of Buffalo, with the plate behind the shoulder and five minutes' exposure, gives a fair idea about the conditions before the operation. The head of



Subacromial dislocation of the head of the humerus.

the humerus is shown pointing directly backward, the tuberculum minus occupying the glenoid cavity, and the tuberculum majus pointing forward and found directly under and behind the coracoid process. The arm is seen in abduction and rotation inward, the latter indicated by the absence of the tuberculum majus from its proper place below the acromion. The glenoid cavity of the scapula could not be felt from the front, as in cases of subspinous dislocation. It was occupied by the tuberculum minus with the tuberculum majus in front, below and behind the coracoid process.

This dislocation is considered rare. I have never seen it before, and am not aware that an X-ray picture has been taken from it before. It has frequently occurred during an epileptic fit, probably by internal rotation. Stimson states that the common mode of production is pressure backward and outward upon the head of the humerus, directly or through the elbow, combined with adduction of the limb across the front of the chest and rotation inward. Forcible rotation inward of the arm alone may produce it, as shown in experiments on the cadaver. It seems, however, difficult to understand how it can occur in a strong, muscular man lying in bed and having a severe epileptic convulsion, but with nobody restraining him!

Many years ago I had a patient with double subcoracoid dislocation, unrecognized for seven weeks. He, too, had had severe convulsions with unconsciousness resulting from an overdose of camphor and lasting several hours, but four strong men had been trying to keep him quiet on the bed and restrain his violent motions. The dislocations were overlooked simply because the idea prevailed that a fall or direct injury was necessary to produce them, and it had not entered the minds of his physicians, both dead now, that a man could dislocate his shoulders while lying in bed. The position of the head shows how the reduction can be accomplished. It is necessary to elevate the arm and pull it outward in order to disengage the tuberculum minus from the glenoid cavity. Strong outward rotation will then probably reduce the dislocation, as it did in this case.